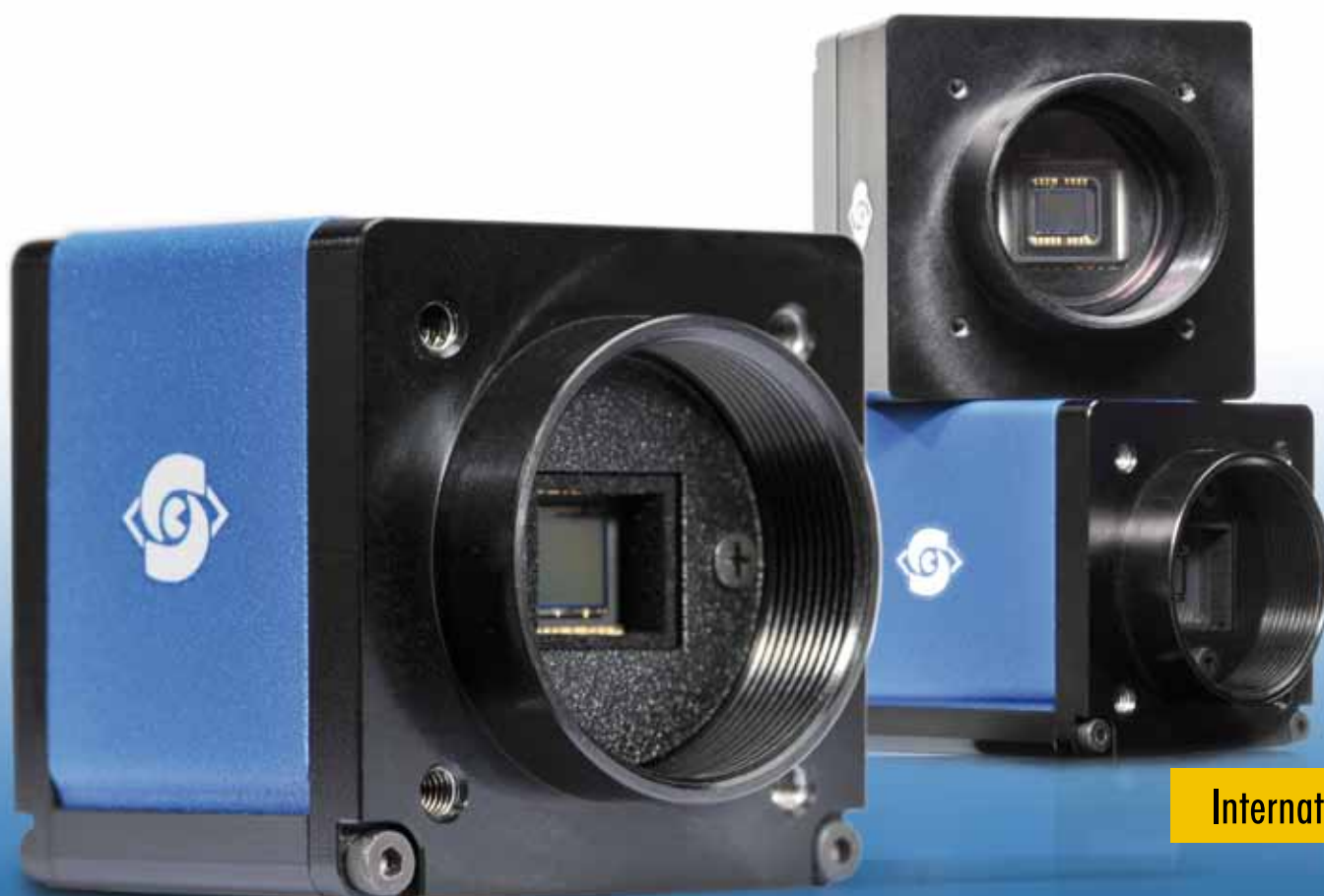# SVCam-ECO

GigE-Vision camera series, VGA up to 5 MegaPixel,
Standard-, PoE- and IP67-versions

SVS-VISTEK

International

Scale your vision.

SVCam-ECO

GigE-Vision camera series, VGA up to 5 MegaPixel,
Standard-, PoE- and IP67-versions

Unsurpassed flexibility with great performance and affordability. This characterizes the SVCam-ECO series best. You will find all popular CCD-Sensors from Sony in the ECO series. SVCam-ECO cameras are available in 60 different versions with resolutions from VGA up to 5 Megapixel. ECO series cameras are designed to achieve high frame rates while maintaining excellent signal-to-noise ratios and at the same time providing an industry-leading small footprint. Supporting the new standards of GigE Vision™ and GenICam™ the SVCam-ECO series opens up new dimensions for integration into your application SW-Environment.

Whether you prefer to power the SVCam-ECO from your machine and use the precise I/O-timing of the robust ECO I/O-concept, or you want to get advantage of the "Power over Ethernet" technology (PoE version) due to the lean cable concept – SVCam-ECO provides an efficient answer to your demands.

These ensures an easy integration into new or existing imaging systems. With its cutting-edge electronics design the ECO series offers very high image frame rates at extremely low noise levels. Sophisticated processing of the critical analog CCD video signal by Correlated Double Sampling (CDS) leads to significant noise reduction. The integrated intelligence offers various modes for exposure time and trigger control settings. The SVCam-ECO series enables maximum performance for early identification of defective products, reduction of fabrication costs and an increase in yield.

All versions of the SVCam-ECO series have the following features:
> Progressive Scan CCD sensors
> Monochrome and color versions (Bayer Pattern)
> Various trigger (int./ext./free running) and exposure modes
> Adjustable gain

Features with real value: Power your LED light directly from the ECO series and use it as an innovative strobe controller.

> Auto- exposure and auto-gain
> Various binning modes
> Area of interest modes (AOI)
> Gigabit Ethernet interface with max. 120 MB/s datarate
> GigE-Vision and GenICam standard compliant
> 8/12 Bit video data stream (14 Bit ADC)
> 64 MB memory inside
> White balance for color versions (one push or manual)
> Proven I/O-Concept: 2 x Input (0-24 V), 1 x Input RS-422, 2 x Output (24 V, 0,3 A), 1 x Output RS-422, 1 x Serial RS-232
> CS/C-Mount lens interface
> Operating temperature range from -10°C (non-condensing) to +45°C
> Wide range Power conditions: 10 – 25 V DC
> SDK for Windows XP/7 (32/64 Bit) and Linux available

NEW FEATURES
> Sequence-Shutter and enhanced Strobe-Functionality
> 4 x Output (24 V, 0,3 A), e.g. for strobing LEDs
> Prepared for Lens- and Pan/Tilt unit control

SVS-VISTEK R&D flexibility
Our unique R&D department is constantly monitoring the market demands to design well tailored, cutting-edge products. It also provides for the flexibility to realize customer specific projects and ideas. Your input is the source of our creativity.

Major advantages of GigE Vision
GigE Vision offers numerous hardware and software advantages for users over the entire range of industrial image processing applications. Most important of these advantages is that the hardware used can be easily and rapidly exchanged, thus shortening design cycles and reducing development costs.
> Cost effective
> Easy to interface
> Flexible; Downwards-compatible to Fast Ethernet and upwards-compatible to 10 GB Ethernet
> Wide range of „off the shelf" industrial-standard plugs and cables up to class IP68
> High bandwidth data transfer rate (120 MB/sec per Output)
> Up to 100 m range without extra switch
> Wide range of applications in image processing
> Any desired number of devices can be connected to the host
> Remote service capability

GiG**E**™
V I S I O N

Camera Type	Resolution [Pixel]	Sensor Size	Frame Rate	Pixel Size [µm]	Lens Mount	Version				
						Standard	PoE	IP67	Monochrome	Color
eco618	640 x 480	1/4"	150 fps	5.6 x 5.6	C/CS-Mount	✔	✔	✔	✔	✔
eco424	640 x 480	1/3"	124 fps	7.4 x 7.4	C/CS-Mount	✔	✔	✔	✔	✔
eco414	640 x 480	1/2"	125 fps	9.9 x 9.9	C/CS-Mount	✔	✔	✔	✔	✔
eco415	780 x 580	1/2"	86 fps	8.3 x 8.3	C/CS-Mount	✔	✔	✔	✔	✔
eco204	1.024 x 768	1/3"	47 fps	4.65 x 4.65	C/CS-Mount	✔	✔	✔	✔	✔
eco445	1.280 x 960	1/3"	30 fps	3.75 x 3.75	C/CS-Mount	✔	✔	✔	✔	✔
eco267	1.360 x 1.024	1/2"	25 fps	4.65 x 4.65	C/CS-Mount	✔	✔	✔	✔	✔
eco285	1.360 x 1.024	2/3"	34 fps	6.45 x 6.45	C-Mount	✔	✔	✔	✔	✔
eco274	1.600 x 1.200	1/1.8"	26 fps	4.4 x 4.4	C/CS-Mount	✔	✔	✔	✔	✔
eco655	2.448 x 2.050	2/3"	10 fps	3.45x 3.45	C/CS-Mount	✔	✔	✔	✔	✔

Connector pin-out

Standard and PoE
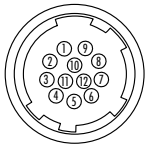
1   VIN- (GND)
2   VIN+ (10V to 25V DC)
3   RXD (RS232)
4   TXD (RS232)
5   IN1 (0-24V)
6   IN2 (0-24V)
7   OUT1 (open drain max. 24V, 0.3A)
8   OUT2 (open drain max. 24V, 0.3A)
9   IN3+ (RS422)
10   IN3- (RS422)
11   OUT3+ (RS422)
12   OUT3- (RS422)

IP67 version

1   VIN+ (10 V to 25 V DC)
2   VIN- (GND)
3   RXD (RS232)
4   TXD (RS232)
5   IN1 (0-24V)
6   IN2 (0-24V)
7   OUT1 (open drain max. 24 V, 0.3A)
8   OUT2 (open drain max. 24 V, 0.3A)
9   IN3+ (RS422)
10   IN3- (RS422)
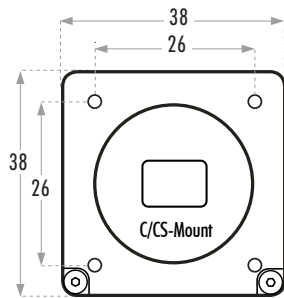11   OUT3+ (RS422)
12   OUT3- (RS422)

Ethernet Standard and PoE

1 2 3 4 5 6 7 8
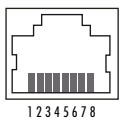
Ethernet IP67

On IP67 versions an M12-8 connector
is used for Ethernet communication (2)

Dimensions [mm]
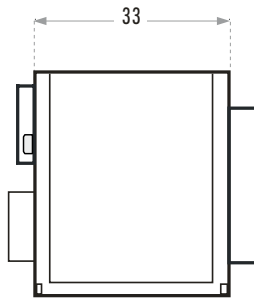
Front view | Side view | Rear view

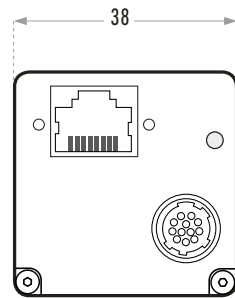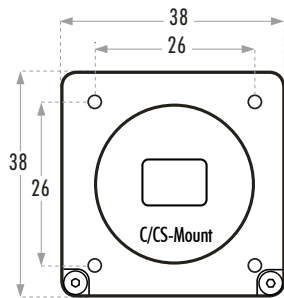### Standard version

38 | 26 | 38 | 33 | 38

eco285: C-Mount only

PoE version

38 | 26 | 38 | 45 | 38
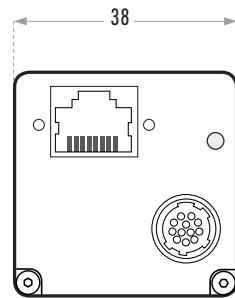
eco285: C-Mount only

IP67 version

42 | 26 | 42 | 31,5 | 42
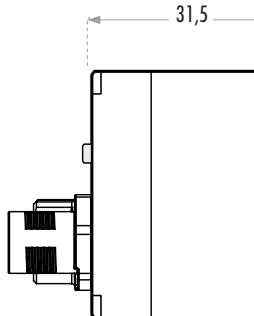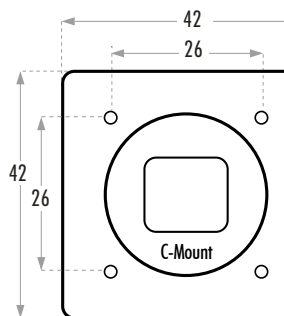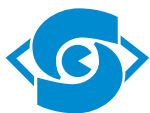
C-Mount
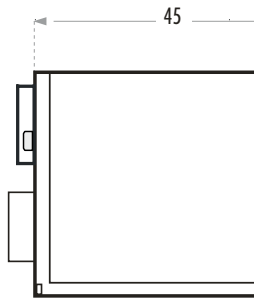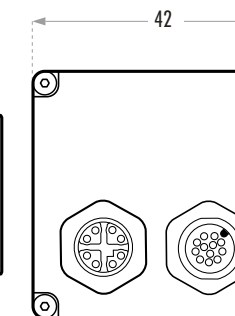
Optional IP67 lens protectors are available for the IP67 versions

Application Areas

SVCam cameras are used successfully in a wide range of different industries, e.g.:
> Aerospace
> Automotive
> Beverage
> Food
> Information
> Mechanical engineering
> Medical technology
> Optical metrology
> Pharmaceutical
> Photovoltaic/power engineering
> Plastics
> Printing
> Semiconductor
> Timber
> Traffic monitoring
> Transportation systems

SVCam – High-performance CCD cameras made by SVS-VISTEK

"SVCam" stands for high-performance CCD cameras developed and manufactured in modular designs which can be tailored to meet specific customer requirements. In total there are currently five camera series, representing state-of-the-art camera technology which match the specific needs of our customers:

SVCam-ECO
Maximum performance with a minimum of size. Cost-effective Gigabit Ethernet camera series for your applications.

SVCam-EVO
The Masterpiece of camera engineering. Combines high resolution with the highest level of speed. DualGigE- or Camera Link-output available. A very unique set of features to maximize flexibility and benefits.

SVCam-CF
Diversity and flexibility with Gigabit Ethernet or Camera Link interfaces. Coverage of the most popular CCDs in order to suit all of your applications.

SVCam-HR
Maximum resolution, yet smallest design possible. With Gigabit Ethernet and Camera Link interfaces for those applications requiring absolute precision.

SVCam-SLC
Slim, right-angle housing allowing access to space limited applications. This very unique GigE Vision camera series will open up new opportunities.

Supported Interfaces

GigE VISION™   GEN<i>CAM   CAMERA Link

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